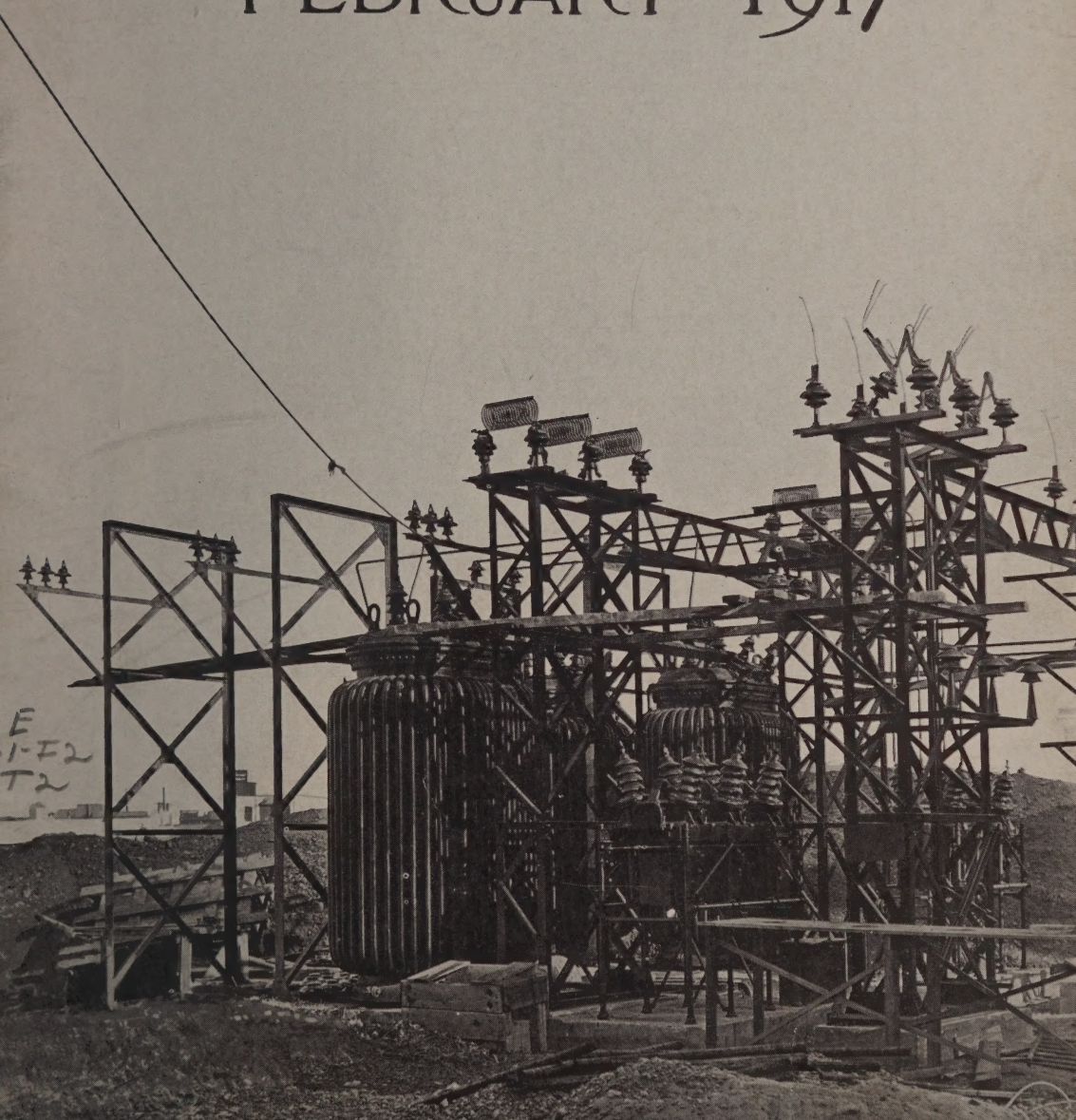
Geo E. Tull

TENNEY SERVICE

· FEBRUARY 1917 ·



THE MALDEN-SALEM TRANSMISSION LINE
OUT DOOR SUBSTATION, PEABODY STREET, SALEM.

TENNEY SERVICE

Vol. IV Boston, Mass., February, 1917 No. 2

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HOW PRESENT CONDITIONS AFFECT THE GAS AND ELECTRIC INDUSTRY

By A. B. Tenney

FOUR years ago a new administration assumed control of our Government. High cost of living was to be immediately reduced by a lower tariff. No sooner was this in effect than our industries began to slow down and the number of unemployed increased so rapidly that the legislatures of New York and Massachusetts appropriated large sums in order to provide work and relieve many people who faced starvation. Then followed the great war, still in progress, and the unexpected demand upon our manufacturing industries to supply the demands produced by this horrible wastage. With this unnatural boom and, sad to relate, correspondingly increased cost of all raw materials, there has been a corresponding increase in price of everything we eat or use.

Of course there are some exceptions to this general statement. I refer particularly to Public Utilities. Every item entering into the cost of Transportation, Telephony, Gas, Electricity, has advanced in the same proportion that the raw materials in our food and clothing have advanced, but with this great difference the prices to the consumer has remained the same. Every day we see in the newspapers evidences of the inflated prosperity that every line of business is enjoying except the Gas, Electric, Telephone, and Transportation Companies

Now, what is to be the outcome? It is easy enough to say what it should be. We know what has been done. We have seen milk, eggs, etc., and clothing of all kinds advance in price without the necessity of approval from anyone; but with us, the Government (by this I mean the State Government) demands the right to fix the prices at which we shall sell our Gas or Electricity or Transportation.

In spite of the facts that gas oil has increased over 60%; that coal has more than doubled at the mines; that water freights to Boston. Haverhill, Salem and Revere have trebled in some instances; that gas pipe costs $40.00 per ton when formerly it cost $30.00 and copper wire 35c where formerly it cost 17c; does any one think we would be any more successful in getting permission to raise our prices than the Railroads have been?

What, then is the answer?

Reduce our free service; i.e. free meter connections, free cleaning of burners, stoves, lamp renewals and flues, etc. New ways of doing the same thing must be found, old material must be made to do the work of new, automobiles must not be allowed to stand with the engine running, we must seek to get two miles for each gallon of gasoline where heretofore we got one, paper, pencils string, ink, and blotters, used freely and carelessly before, must now be used sparingly. A hundred items can be mentioned in which savings can be made.

Never did necessity offer greater opportuities for invention along lines of economy, along lines of self-sacrifice. Economy and carefulness must be our watchwords from now on until matters once more become normal. So I ask every employe to "go to it" with a view of saving every cent we possibly can and help to weather the storm which now surrounds us. Suggestions from any one will be gladly received and given due consideration.

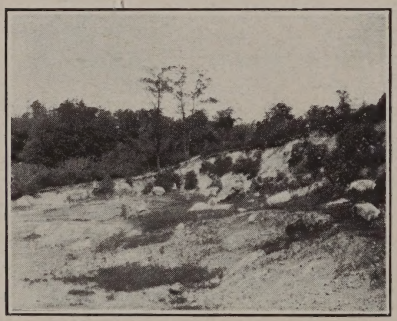
THE MALDEN-SALEM TRANSMISSION LINE

By Arthur J. Harty

Construction Engineer, Charles H. Tenney & Co.

THE keynote of the twentieth century is EFFICIENCY, shown not only in the development of efficient methods of saving life and property but also in the destruction of the same. thus proving man's ability to turn nature's resources to his benefit, or the reverse.

The Tenney System has always shown itself ready to keep pace with its ever increasing business, and not only to do so but, with the most efficient and economical



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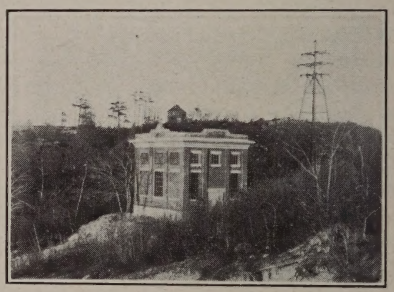
methods, so that the slogan may well be its motto, "The Best is The Cheapest."

The ever increasing power and lighting loads of the Malden Electric Company's plant in Malden, where more capicity was sorely needed but practically prohibited on account of the physical location of this power plant, necessitated some means of obtaining this result without any loss of efficiency. A solution of this problem was first attempted in the autumn of 1913, when orders were issued to the writer to report as soon as possible on the feasibility of connecting the Malden Electric Company's plant with that of the Salem Electric Lighting Company, by a high tension power line; and it was plainly to be seen that if the idea could be successfully carried out



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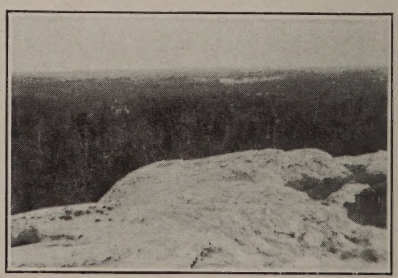
the generating capacity of the Salem Plant, which had unlimited development possibilities, situated as it is by the South River, accessible by water where coal, etc. can be delivered on its wharf and stored in its yard, could be made use of in relieving the perplexing situation in Malden.



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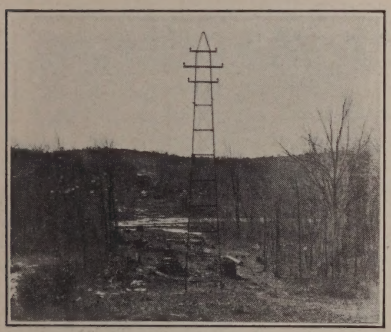
On November 21, 1913, the first work on this project was started which consisted of securing

right of ways and working up the the plan of the project as a whole. The idea was to lay underground cables from the Malden plant to some point in Melrose and there build a terminal house, carrying the wires by overhead towers to a point in Salem, securing a 40 foot right of way, and at this point to build another terminal house, that would provide means of laying more underground cables from this point into the Salem Electric



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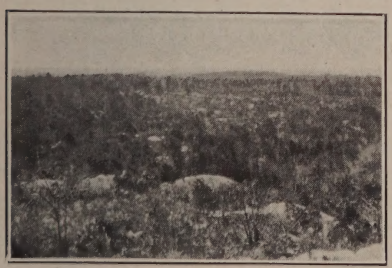
Lighting Company's plant on Peabody Street.

During 1915 and 1916 it is needless to say what was done at



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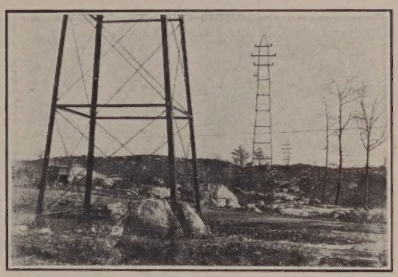
the Salem Company's plant, as this has been very aptly described in the Tenney Service Magazine for this period, but just a word may be said at this time, that the Salem plant's generating capacity has been increased considerably, and before the spring of the present year should be close to 18,000 K.W.



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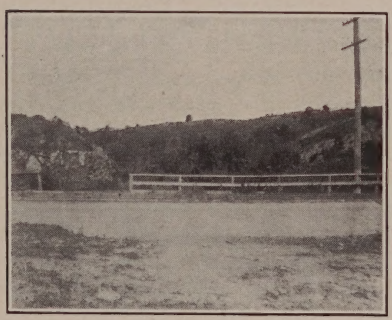
While the work of the reconstruction was being energetically carried on, the securing of the rights of ways were slowly but surely being obtained



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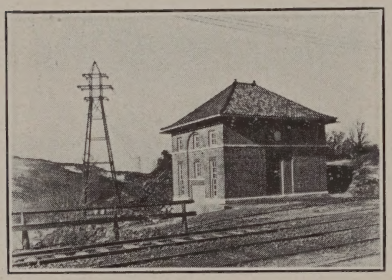
The index plan shown on pages 44-45 gives the true line passing through very rugged and barren properties. The picture on the cover shows the outdoor substation, located on Peabody Street, in the rear of the Salem Electric Lighting Company's plant.

The transmission line in its alignment from Melrose terminal house to the Salem terminal house passes through the city of Melrose, the towns of Saugus and Lynnfield, the city of Lynn, the town of Peabody (now a city,) and the city

of Salem, having a 40 foot right of way over 38 different properties, and crossing 8 highways. The length of this overhead line between terminal houses is 50,371 feet, or 9.54 miles, consisting of a 3 phase double circuit line of 00 conductors supported by 124 steel towers averaging 50 feet in height. There are 12 angles in the line, three of them over 40 degrees and



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the others averaging about 4 degrees. The average span is about 406 feet, and the shortest span is 170 feet where a jump is made from tower No. 1 to tower No. 2, adjacent to the Melrose terminal house. The longest span is 870 feet situated in Peabody, the difference in elevation being 106 feet. This last mentioned point has always been considered the highest point in the town of Peabody and in the past was used for a bonfire location for Fourth of July early morning' celebrations.

The construction of the line was let to the Fred T. Ley Company and work was started July 17, 1916 and will be completed on or before February 1st, 1917, this has included the cleaning out of the 40-foot right of way, building all footings, erecting all towers and pulling in the lines ready for final testing.

In connection with the original idea of building this connecting bond between these two above-mentioned plants it appears to the writer another feature of the desirability of this line. The destructive fire of 1914, which occured in the city of Salem, although not affecting our plant to any great extent would have caused us great inconvenience, should the plant have been destroyed, but having this bond, such an occurence in the future is not liable to cause us such untold trouble and loss of prestige.

At the Malden plant in order to connect same with this new line there were several changes necessary. The switchboard at Malden congested as it was, had to be revamped and it was decided to condense the circuits so as to allow a panel for the low tension side of the incoming line from Salem, operated by two 2,000 ampere switches which were installed in the basement of the station

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below the switchboard. A pit occupied by the transformers supplying 13,000 volt power to Revere station was enlarged and rearranged to take the Salem lighting switching arrangement and new transformers. The lighting arresters were located on the roof of the plant. The underground cable from the Melrose terminal house enter this pit through two remote controlled 22,000 volt switches. As soon as the line is in operation

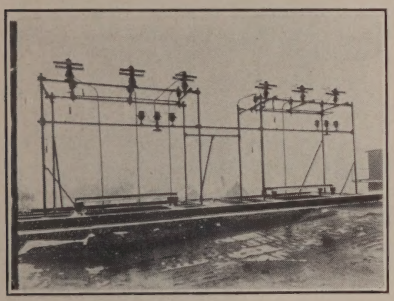
the present Revere transformers of 13,000 volts will be connected to this line with a tap-off to the Everett sub-station and the voltage raised to 22,000.

The following views were taken showing the territory and other features in relation to the transmission line as erected:

No. 1 picture shows the character of the land where the terminal house was built in Melrose.

No. 2 picture shows the terminal house erected and No. 1 tower.

No. 3 shows a view of the territory in Lynnfield taken from Castle Rock near the Saugus line looking toward Water Street.



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No. 4 shows a typical A frame built near Water Street and looking toward Castle Rock in the distance with the right of way cleared out.

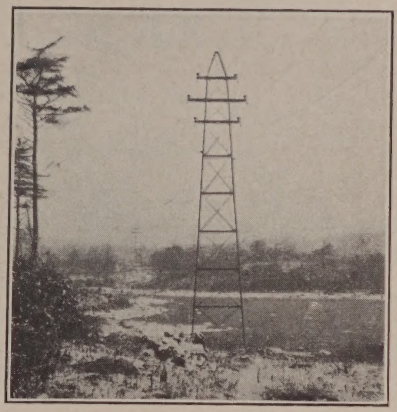
No. 5 shows a territory owned by the city of Lynn on the east side of the Newburyport Turnpike before any work was done, or the right of way cleared.

No. 6 shows the Newburyport Turnpike with right of way cleared and towers erected.

No. 7 shows the location on Highland Ave., Salem before our terminal house was built.

No. 8 shows the terminal house erected and view of tower 124 in rear.

No. 9 shows the location of transformers in the Malden Electric Co.'s plant on Center Street.



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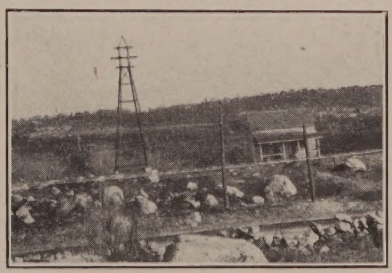
No. 10 shows the location of the lightning arresters on the roof of the Malden Electric Co.'s plant.

No. 11 shows a typical A frame. This was taken at Tower No. 5 where we crossed the ice pond on Byran S. Hone's property, east of the Melrose Saugus town line. This span is 670 feet long.

Picture No. 12 shows a typical T frame. This view was taken at tower No. 72 where we cross Lynnfield Street in Lynn over



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properties of Asa T. Newhall and looks toward the Peabody Lynn town line.

The underground cables leave the power-station and run to this structure carrying a voltage of 2300 volts and is then stepped up to 22,000 volts, and is transmitted by more underground cables to the terminal house at Highland Ave., and from this point overhead by means of steeled towers to the Melrose terminal house near Heywood Ave., Melrose and then underground to the Malden station on Centre Street where the voltage is then stepped down to 2300 for distribution.

We hope to have the testing of this line in a week or two and full operation and distribution of power on or before April 1, 1917. In conjunction with the work we are completing and expect to put into service about the same time a 22,000 volt line from the Malden Electric Company's plant in Malden to a sub-station situated at the corner of Kelvin and Norman Streets in Everett, Mass., with all the necessary equipment of cell structures, transformers, etc., to handle our additional loads for one of the General Electric Company's plants located in this neighborhood.

NOTE:—See Map of Malden-Salem Transmission Lines on Pages 44-45

A LETTER OF APPRECIATION

Malden & Melrose Gas Co.,
Mr. C. E. Paige, Mgr.,
Malden, Mass.

Dear Sir:—

We recognize with great satisfaction, the excellent co-operation which your company has extended to the Forestry Department, in the protection of our public shade trees. The promptness and ability shown by your employees speaks volumes for your management. We are firmly convinced that such a course can only be conducive of the best results for the interests of your company, this department, and the citizens of this community.

Very truly yours,

Watson B. Gould.
City Forester.

ACCIDENT PREVENTION

"SAFETY FIRST."

Fall River Gas Works Co. Employes Dine and Listen to Address

By C. E. Paige of Malden

From a Fall River Newspaper

THE January meeting of the Gas Works Co. Employes' Association was held Wednesday evening in the company clubrooms in the Main street office building. Dinner, prepared by the company chefs, was served at 7 o'clock. Following the dinner Mrs. Edward Bottomley sang several selections which were well received.

The topic for the evening's consideration was "Safety First," and was ably presented by C. E. Paige of the Malden and Melrose Gas Light Co. Mr. Paige, besides being one of the principal men in the Tenney companies interested in the "Safety First" movement, is also chairman of the publicity and membership committee of the National Safety Council with headquarters at Chicago. Into his talk, which was illustrated with stereoptican views from current gas practice, he brought a broad national viewpoint applicable in general to all industries.

The main idea of the "Safety First" movement now sweeping the country, he said, was education whose motive was the production of the "Careful Man." To accomplish this, two things are being done, namely, the elimination as far as possible of all accident hazards, and secondly, a nation-wide advertising propaganda to instill into everybody's mind every where "Safety First" thoughts.

Regarding his own company. Mr. Paige said that each department maintained its own "Safety First" committee, which makes monthly reports suggesting the abolition of accident hazards and the installation of preventive measures. These reports are competitive between the committees and a good deal of interest is thus obtained. The company also prints every two weeks "Safety First" bulletins which are posted in well-chosen points about its property. In addition these bulletins are mailed with the monthly house organ, published by the company, to the home of each of its employes, so that the families dependent upon employes are aroused to their benefit from "Safety First."

TENNEYGRAMS

FITCHBURG GAS & ELECTRIC LIGHT CO.

B. J. Ryan, *Correspondent.*

The Cabot creamery has replaced their steam power with electricity, therby making a saving of $175,00 a year in their operating expense.

Our club meetings this season are being planned along educational lines.

At the meeting on Nov. 22nd, J. Gumbleton demonstrated how to make a joint in a gas main, and and also how to connect a service to the main. This was of great interest, as many of the men had never seen the work done before.

The method of using the Lungmotor was shown by Mr. Vandell and after his talk the machine was turned over to those who desired to try to operate it themselves.

Our meeting on Dec. 28th was practically "Electrical Night." L. Gardner and his helper showed how a joint is made on a lead cable, and A. K. Amazeen showed the working of meters and testing apparatus. The question box seems to have taken a new lease of life, as about fifteen questions were found in it before this meeting, all of which were answered during the business meeting following supper. The discussion of questions will be of great benefit to all.

MONTPELIER & BARRE LIGHT AND POWER CO.

L. B. Provost, *Correspondent*

The towns of Waitsfield and Moretown have been separated from the Waterbury territory and now form a district by themselves. Mr. A. E. Farr, of Waitsfield, has been placed in charge of the new district.

A new theatre, "The Playhouse," which has been under construction for several months, was opened on Christmas day. The electrical equipment consists of 15 horse power in motors and 25,000 watts in lamps. This is the largest and best equipped theatre in the State.

Two new electric signs were added in December; one at a restaurant and the other at a jewelry store.

Superintendent W. F. Corry, of the Traction Company, has returned from a two weeks visit in Arkansas.

The Christmas sale of appliances under the direction of Office Manager, E. A. Harris, was a distinct success. More articles were sold than in any previous year; following is a list of sales:–

29 toasters	8 heating pads	2 immersion heaters
24 flatirons	13curling irons	1 Junior range
16 grill stoves	5 perculators	1 desk lamp
2 disk stoves	1 tea pot	1 corn popper
1 milk warmer	1 radiant grill	2 egg boilers.

One hundred and fifty horse power in motors was added to the lines during the month of December; this makes the total increase for the year 1,480 H P. We expect to add 2,000 H P during the year of 1917.

HAVERHILL ELECTRIC CO.

THOMAS D. BOND, *Correspondent.*

The Christmas dinner of the Haverhill Electric Club was held at the club rooms on December 21st. Sixty-five members were present and enjoyed the dinner as served by caterer John Bragdon. The menu consisted of–

Oyster Cocktail
Roast Pork Mashed Potato
Squash Creamed Onions
Chocolate and Vanilla Ice Cream
Fancy Cake Coffee
Cigars

We were pleased to have the young ladies from the office at this dinner.

At the close of the dinner President Ball presented caterer Bragdon with an electric toaster, in appreciation of his many good dinners. A traveling bag and thermos bottle were also presented Supt. James E. Frank by members of the distribution department.

The entertainment of the evening was furnished by Herbert G. Veasey, assisted by the Windsor Quartet. Mr. Veasey is a reader of quite a local reputation and to say his efforts were well received is putting it mildly. You ought to hear "Micky" laugh. Office manager Hurn is a member of the Windsor Quartet.

The club gave a barn dance on the evening of January 2nd, 1917, at the club rooms. Some seventy-five people were in attendence. The men came dressed in overalls and the ladies in gingham gowns and bonnets. Some of the costumes were very humorous.

Refreshments of ice cream and cake was served during the intermission. Dancing was enjoyed by all to the music furnished by Stockman's orchestra.

We are pleased to announce a net gain of 630 H. P. for the six months ending December 31, 1916. We have also made a net gain of 398 meters in the same period.

Joseph McCue, meter reader is finally able to get about on crutches following a bad fall from which he severly injured his knee.

Manager Ball, office manager Hurn, chief clerk Calhane, voucher clerk Watson and Miss Hurtubise, of the office; and chief engineer O'Regan, asst. chief engineer Brown, mechanic Greyon, and asst. engineer Montieth, of the plant have all been out for various periods, with the grippe.

E. V. Walsh, of Malden, has arrived. He will make a systematic test of all our meters.

Report of the Treasurer of the Haverhill Electric Company's Mutual Benefit Association:

RECEIPTS

January 1, 1916

Balance	$ 48.84
Dues collected during the year	180.00
Assessment – death benefit	32.00
Int. on savings account	1.73
TOTAL AMOUNT RECEIVED	$262.57

EXPENDITURES

January 1, 1917

Paid in benefits	$131.00
Paid death benefit	32.00
Surplus	99.57
	$262.57

We wish to submit, for "Current Literature"– "Using Complaints to Win and Hold Business," by George B. Cortelyou, – System; page 62, January, 1917 issue.

SUBURBAN GAS & ELECTRIC COMPANY

H. M. Frank, *Correspondent.*

The annual New Years dinner and entertainment of the local employees association was held on Tuesday evening, January 9th, in the company's garage. The decorations, consisting of streamers of evergreen, colored electric lights and laurel wreaths, were very tastefully arranged by foreman Osborne of the garage. Covers were laid for ninety persons.

We had with us as our invited guests, Mayor Alfred S. Hall, Ex-Mayor A. B. Curtis, President Walsworth of the City Council, general superintendent A. E. Bliss, Messrs. Ernest Pierce, A. R. Von Balson and H. E. Emerson of the local newspapers, and the ladies of our office force. Letters were read from President A. B. Tenney, Mr. H. T. Sands and chairman Joshua Remby of the Winthrop Board of Selectmen, who were unable to attend.

The banquet was prepared by Messrs. Frank and Tomkinson, menu:—

Grape Fruit with Maraschino Cherries Olives
Celery Roast Vermont Turkey
Escolloped Oysters
Mashed Potatoes Boiled Onions Squash
Harlequin Frozen Pudding
Macaroons Fruit and Nut Cake
Coffee Cigars Cigarettes

After the favors were distributed manager Chisholm called the gathering to order and turned things over to General Bliss as toast master. Brief remarks were made by Mayor Hall, Ex-Mayor Curtis, and President Walsworth.

This ceremony concluded, the entertainment opened with a five reel photo play entitled "The End of the Road," followed by another two reeler entitled "Pals." Miss Ruth Goodwin and Mr. George Henry then entertained with songs, and Mr, Tom Gillen with songs and stories. Then came a three reel feature produced by the General Electric Company entitled "King of the Rails," showing the evolution of travelling from the days of the American Indian up to the present time. The entertainment closed with a one reel comedy entitled "The Washful Waiting."

The entire affair was rated one of the best ever held by our local organization.

Ralph Day, meter reader, has been promoted to the electric meter department.

Mr. Thomas Legge of the line department, who has been ill with typhoid fever, has returned to work.

Mr. Carl Fish, bookkeeper, has gone to Cape Cod for a few weeks on account of a nervous breakdown.

Mr. Winsor Borden, recently transferred from this office to Oswego, paid us a visit while spending a few days at home during the Christmas holidays.

SALEM ELECTRIC LIGHTING COMPANY

F. E. Sawyer, *Correspondent.*

There have been several promotions in our organization since the first of the year. Mr. William P. Verry has been made Asst. Superintendent, assisting Mr. Kingsley, Mr. Harry A. Cook, our storekeeper, succeeds Mr. Verry, and Mr. Joseph W. Pope, asst. storekeeper succeeds Mr. Cook as storekeeper.

Our big day for 1916 output was on December 21st, peak 7200 K. W. with an output of 74160 K. W. H.

New coal handling machinery is being installed on our wharf and new tracks laid around the wharf so we will be able to handle coal either from the wharf or from barges on the South river.

J. H. Sullivan, the contractor having the contract for the grading for the Salem hospital, has discontinued the temporary service for this work. While this installation was temporary, it proved to be a good customer.

PEOPLES GAS & ELECTRIC COMPANY

Wm. M. Borden, *Correspondent.*

Messrs. L. J. Willien and G. R. Wood visited our plant during the past month.

Mr. R. F. Burnett and the writer spent the Christmas holidays very pleasantly and profitably in Boston and its suburbs.

Owing to the great increase in the price of gas coal, we were obliged to raise our coke prices fifty cents per ton on January 1st, 1917.

With the coming of the New Year two new young men joined our organization; Elmer Parker as meter reader and John Wright as office boy.

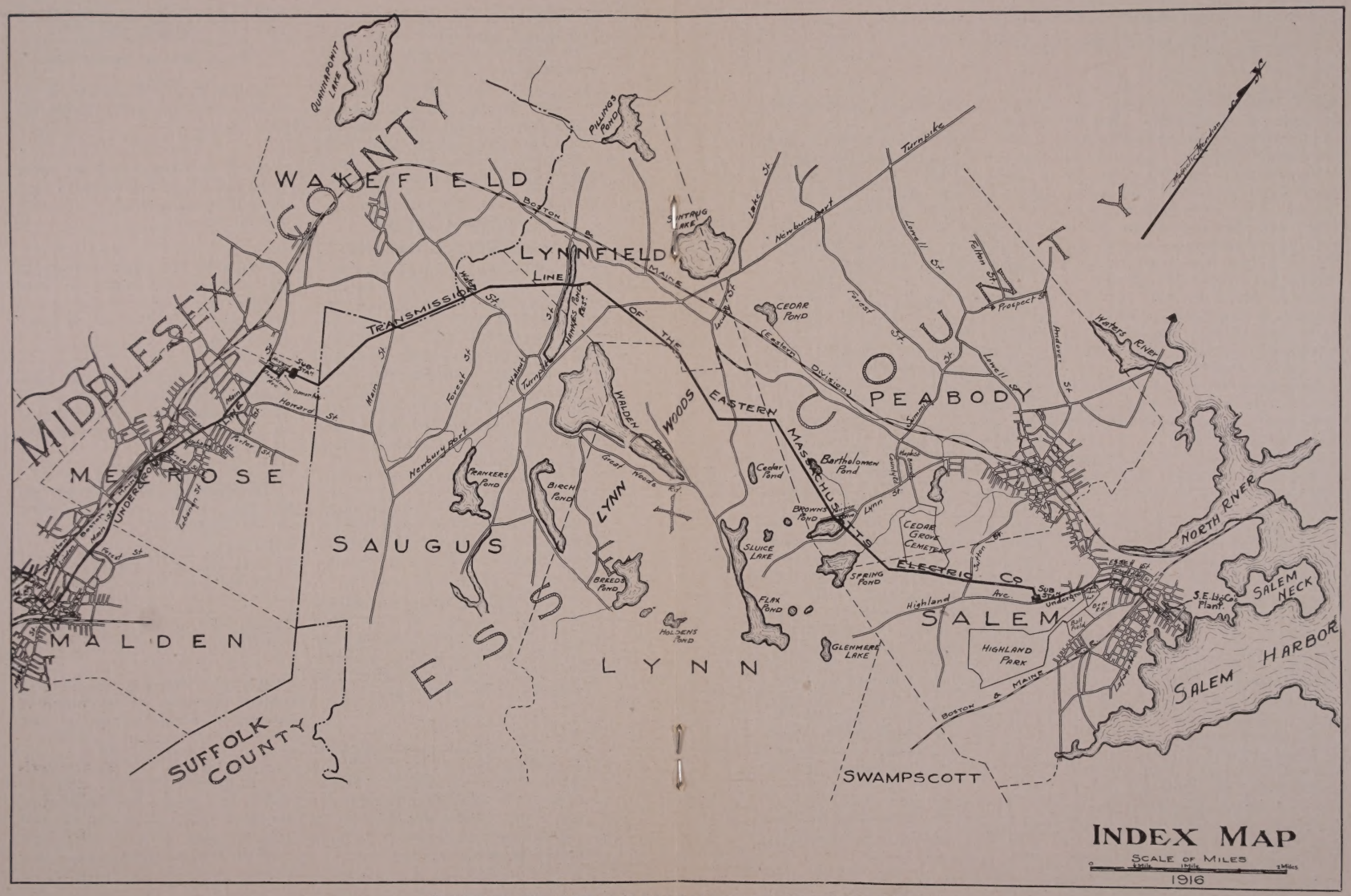
The following officers were elected at the second annual meeting of the Employees' Club.

R. F. Burnett, President,
S. Edwards, Vice President,
W. M. Borden, Secretary Treasurer,

Board of Governors
Messrs. Gillen, Adriance, Stone, Moriarity, Keenan, L. B. Stewart and Wm. Mundy.

Mr. R. F. Whitney was recently elected chairman of the board of governors of the fortnightly club.

Work on our new water-wheels is progressing steadily, and the coffer dam in the hydraulic canal has been taken down and the dirt removed and a new coffer dam built in the tail race.



ROUTE OF THE NEW MALDEN-SALEM TRANSMISSION LINE

THE AMBITIOUS STENOGRAPHER

How She Can Make Herself More Valuable

METHODS are being discussed constantly, through the columns of this magazine and elsewhere. Practises are standardized; various positions and the noncomitant responsibilities are described. My stenographer says, "Why don't you write an article on what stenograhers should do? We have been told in all kinds of ways what is expected of men, in different positions, why not say something about the girls?"

By all means. We hasten to correct the oversight. We couldn't get along without them.

Secretaries or stenographers, the words begin with "s" so does service, and that is what practically all of them typify.

Everyone, whose work requires stenographic assistance appreciates the very great service which such assistants render.

Perhaps we wouldn't admit that we couldn't hold our jobs without them, but we know that they can materially assist in handling many of the details which come up besides handling matters of routine correspondence.

There are a few fundamental qualities which a stenographer must possess to hold her position, even in the most charitably inclined organizations:

She must be reliable, trustworthy and neat. I had in mind that she must be punctual. This would be overdrawing the situation for we know of stenographers who are not punctual, who still hold their jobs and indeed are very valuable to their employers. When their compensation is determined, the matter of promptness is an important consideration, but it does not seem a vital requirement for holding the place.

If a stenographer wishes to get along well, there are other qualifications, (which all who desire may develop) which may materially affect her progress.

Personal neatness, a pleasing and pleasant manner help to produce a requisite confidence.

The need for accuracy and neatness in taking dictation and producing letters is too obvious for further mention.

Very often the recipient of a letter forms an opinion (it may be sub-conciously) of a concern by the physical appearance of a letter. For example, we have in mind a business house from whom many letters are received. These letters show all too plainly that they have been subjected to the archaic torture of the letter press and frequently are almost illegible. The letters are folded at random with out regard to bringing the corners together neatly. The stamps may be found on any part of the envelope, approximating the upper right hand corner, the envelope is sealed in such a way as to ensnare a part of the letter which results in the further mutilation of the letter before it is even read. This concern uses expensive stationery but the effect is emphatically poor because of the evident carelessness with which correspondence is handled.

The above may sound hypercritical but it will serve at least to cultivate neatness and precision in other matters.

"Dictated by the writer, but signed in his absence." Many articles appear, from time to time,

in periodicals, deploring the use of the above phrase or its equivalent. We all feel sort of "let down" when a letter comes in this way, especially a letter on an important matter. Good business men regret the necessity which prevents their signing all the letters which they dictate. The stenographer has here an opportunity to be of service by using the greatest care to see that every part of the letter is correctly written. Mistakes from this cause are exasperating to the writer and at least embarrassing to the stenographer.

The satisfactory stenographer is not the one who considers the departure of her "boss" the signal for a holiday. Rather is she the one who realizes that then, more than ever, must she be careful in the protection of his interests.

In many cases she must meet unexpected callers and by her tact and judgement the visitor often gains an impression of the man with whom he may have to do business. This is important work and if well done cannot but result in the appreciation of her employer and the increase of her emolument.

Next to his personal appearance, a man is judged by the looks of his office. The stenographer can produce a result in this direction which will make her employer proud, even in the humblest quarters.

Accumulations of letters, catalogues, circulars blue prints and pictures not bearing on the business cannot help but make an office look untidy and give the impression that the man, the stenographer, or both are very lax.

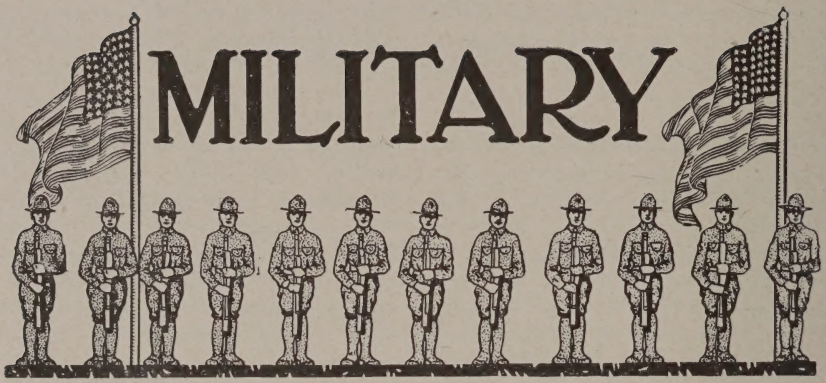
Most factors in the success of a stenographer are local - some employers want things done one way, some another, and the stenographer must learn the wishes of her employer and anticipate them.

The ambitious stenographer will find many ways to be of value. If she is persistent, she becomes almost indispensable. More and more are matters left with her for handling, and the rewards are commensurate with the result in the long run.

What are *your* ideas?

KIND WORDS FROM THE REVERE JOURNAL

> "It is no wonder that the Suburban Gas and Electric Co. gets the best of co-operation from its employees when it is considered that the club meetings and affairs of that nature are so heartily supported. In respects this is an ideal public service corporation and not only satisfies most of its customers but always succeeds in meeting the wishes of the public officials in the matter of public service."



G. A. Rust, Military Editor

We are fortunate in being able to publish this month an article by Captain Porter B. Chase of the First Corps Cadets, N.G.M., in which Captain Chase relates his experiences when taking recruits for the 8th Regiment to the Mexican border last summer.

Captain Chase is well known among Massachusetts Military men, and devotes considerable of his time to the First Corps Cadets and to detached work in the National Guard of this state.

Military Editor.

EXPERIENCES ON A TROOP TRAIN

By Porter B. Chase

First Corp Cadets, N. G. M.

THE recruit is a peculiar animal; those that were sent from Framingham to El Paso, Texas, on our train seemed to be particularly so. They had been in the service, on the average, not over two weeks and some of them not even two days, so that their conception of obedience and discipline was decidely vague.

From what developed on the trip it was evident that they had an idea that the United States was conducting a pleasure trip for their special benefit, that they should be allowed to do as they pleased during the journey, to have matters ordered to suit their whims and convenience and to have a voice in the arrangement of the details on the "Town-meeting" principle.

This was not, in a way, a surprising state of mind considering the circumstances under which they had been gathered together, drilled, equipped and forwarded to their respective units on the border Those who had been in Framingham for the full two weeks since the departure of the "regulars" (as the first lot to go were called by the rookies) had had some drill in both close and extended order but without rifles and, in the majority of cases, without uniforms.

The militia officers in charge of the recruit camp at Framingham had been doing their very best in the limited time they had to shake the men into some sort of form and to give them some idea of military

courtesy, discipline and drill, but the work of examination, vaccination, inoculation, enlisting, mustering and equipping them had made it almost impossible to give them any precise and detailed instruction.

Since July 1, those officers drafted into the federal service had been busy night and day on the necessary paper work of the recruits for whom they were respectively responsible. As all of the forms were new and some of them not available in sufficient quantities, this was a long job and all of the officers could be found working well into the late hours every night.

The last four days previous to setting sail for the border were particularly busy ones; many new recruits were being received who had to go through the numerous time-consuming processes of muster-in before their clothing and ordinance property could be drawn and issued. In fact, some of the clothing was not issued until the morning of departure.

Various rumors spread about camp in the days just previous to leaving. It was said that the troops were to go by transport from Boston to Galveston, Texas; that they were to go by rail in day coaches; that they were to go in tourist sleeping cars; that five non-commissioned officers of the militia would be sent with each provisional company of recruits; that six officers were to go with every train, and numerous combinations and variations of the above.

Two days before we were scheduled to leave, the officers in charge of recruits were directed to select experienced and reliable men for acting sergeants and corporals from the recruits, as no non-commissioned officers would be sent with detachments. This settled one question at least. The designation of the acting non-coms was left to the militia officers who were most familiar with the men, as none of the drafted National Guard officers had any opportunity to judge of the fitness of any of the men for military command. It is a favorable comment on the judgment of the officers to note that with but one or two exceptions, no changes in the appointments were made after leaving camp. It was a difficult situation in which to place these men, putting them over their fellows who knew that their authority ended with the journey, but all did good work and to the extent of their knowledge and experience they made good.

During the last four days of the stay of the recruits at the Mobilization Camp there were so many things to be done by each man individually that no time could be found for drill except the performance of regimental parade (without arms) on the last two or three evenings. In consequence of this the recruits were not as smart and snappy as they would have been had they had their daily close order drills right up to the time they went onto the cars.

The night before the troops were scheduled to leave was a very busy one; there was still some property to be drawn and issued and much paper work to be finished up before leaving; so it meant late hours and some of the drafted National Guard officers did not go to bed at all that night.

The morning of July 10 came at last and with it a hard, cold rain. It was a dismal morning to get away, with much to be done, but finally the baggage was loaded, roll called and the men marched to the parade ground. Line was immediately formed and in column of

squads in the rain we started for the station. At the gate the band of the 1st Field Artillery fell in at the head of the column and marched us to the train.

It was a depressing march in the mud and rain with only a few stragglers in the town to see the soldiers go away.

The entraining point for our section was Nevinsville, about one-half mile beyond the Boston and Albany station. Our train was number 3 and due to leave at 9.30. The train had been made up, the kitchen cars arranged and stocked with rations and the baggage cars loaded previous to our arrival, so that all that was necessary was to load the men into the cars, each of which was marked with chalk on the outside showing the capacity of the car.

The train itself was made up of 14 coaches, 2 kitchen cars and one baggage car, 17 in all. They were all vestibuled, all steel cars with high-backed seats and there were three men to each two seats. The backs of the seats were removable and the men could make themselves very comfortable.

There were, on our train, three officers in charge of recruits, one captain Medical Corps, one second Lieutenant (train quartermaster) one Sergeant Quartermaster Corps, three private Hospital Corps and five hundred and six recruits, all for the 8th Infantry, N. G. Mass. The officers, non-commissioned officer and the Hospital Corps privates occupied the last car of the train.

As soon as the train started, the Train Commander assembled his officers and gave them hasty instructions as to the conduct of the train with particular reference to the stationing of guards at the doors of all cars and the conduct of the men at stations and other halts of the train. These instructions were added to later but were not materially changed during the trip.

The next thing to be done was to arrange for the rationing of the men and the Sergeant Quartermaster Corps was made responsible for this. The number of persons on the train had then to be counted and verified by the Train Quartermaster and the railroad officials.

A meeting of the officers in charge of recruits and the Acting First Sergeants was called by the Train Commander for 12 o'clock noon and at that meeting more detailed instructions were given them and a first sergeants call was arranged for twice each day, at 9 a. m. and at 5 p. m. when the train was not at a stop, in which case it was held as soon as the train got under way again.

The arrangement of the train was as follows, from head to rear: baggage car, three day coaches, one kitchen car, seven day coaches, one kitchen car, and four day coaches. Each of the kitchen cars, which were standard baggage cars, had two field ranges in it, one at each end of the car. The ranges were set up without the Alamo attachment. The foundations for the ranges were made by placing asbestos sheeting on the floor of the car, over that a sheet of zinc, then one course of brick and over that about six inches of sand. The stovepipe was led out of the side door of the car and furnished with a damper, a fact that was not discovered for several hours by the cooks who had considerable difficulty in making the ranges draw until they found out what the trouble was, when we had no further trouble with the cooking gear. The kitchens were numbered from head to rear and each cooked for the cars immediately

ahead or behind it; that is, No. 1 kitchen cooked for three cars, No. 2 for three cars, No. 3 for four cars and No. 4 for three cars and the officers' car.

We had on the train ten days' travel rations for 560 men so that we knew we had plenty of food for the journey which should not last over six days at most. The travel ration is not a varied one nor is there seemingly a great quantity of it, but it is sufficient. The ration (which is the food for one man for one day—3 meals—) is as follows:

Soft bread, 18 oz., or hard bread, 16 oz.

Beef, corned, 12 oz., or hashed corned beef, 12 oz.

Beans, baked, 4 oz.

Tomatoes, canned, 8 oz.

Jam, 1.4 oz.

Coffee, roasted and ground, 1.12 oz.

Sugar, 2.4 oz.

Milk, evaporated, unsweetened, 0.5 oz.

We had both hard and soft bread in the proportion of one half each and while we used some hard bread, soft was usually served. It will be noticed that there is little cooking to be done beyond making coffee, but warming up the beans and the corned beef helped some and then a very good "slum" was made of tomatoes, ground hard bread with a little corned beef to flavor it. No seasoning is provided for in the ration but at one of the first stops we bought some salt and pepper and that helped quite a little, too.

Our cooks were not professionals by any means, as we had to pick up what we could from among the recruits after the train started, but we found two who had had some experience and put them each in charge of two kitchens and gave them each five men to help them, making three men to each range, which worked very nicely. At first the coffee was none too good but after a little instruction they were all able to make good coffee and do all of the rest of the cooking in good shape.

There was much talk in the newspapers about the men not having enough to eat on the troop trains and there was some talk and complaint among our men that they did not have enough to eat, but the officers ate the same ration as the men and made no complaint. When men who have been active out of doors for two weeks, fed on the garrison ration, are put aboard a railroad train for five days with no oppotunity for exercise and nothing to do but think about themselves, eat, and sleep, there are bound to be some among them who think they are being ill treated, and it is always the officers and the cooks who are conspiring to starve them.

Each day's rations were carefully figured out from the Ration Issue Tables and then apportioned into three meals and the cooks instructed that that was all that they could have for those meals and that they must make it go.

The men were served their meals in their seats. A detail of four men from each car would report at the kitchens at meal times and they would be furnished by the cooks with boilers filled with the food and coffee which they would take to their respective cars and, under the supervision of a non-commissioned officer, serve to the men. There was some grumbling each meal by those who happened to be served last, but as the place for starting in to serve was changed each meal, all got an equal share for the day. There was also some complaint because the officers would not allow the men to buy

cakes, pies and the like at the different stations, but the recruit knows little of what is good for him and would soon make himself sick if allowed to do as he pleased. The fact that the train arrived in El Paso without any sick report beyond a few who were suffering from the reaction of the anti-typhoid inoculation shows that the men received the proper care.

The first incident of any note was the passing of the train through the yards at Syracuse, N. Y., at about midnight the first night out. In some way the engine drivers in the yard discovered that a troop train was passing and every one of them started pulling his whistle cord and for about fifteen minutes there was the worst screeching and howling of whistles that it has ever been my lot to listen to. It was all very complimentary and inspiring but our friends forgot that it was night and that the men might like to sleep.

The next break came when we changed to tourist sleepers at Buffalo, N. Y., Tuesday morning. We had understood that we were to get tourist sleepers at Cleveland, Ohio, but we were awakened early the first morning and told that we would change cars at 5 a. m. The change was made in the yards outside of Buffalo and the exercise that the men got in going from one train to the other was welcomed by all.

The men were rearranged in the new train, three men to a section, but as we were short one car, some had to ride four in a section; however, another car was promised later, so no complaints were made.

Everthing went along nicely until Indianapolis was reached late Tuesday night when three or four of the men got off the train and were rounded up in a saloon nearby. They were put in the baggage car, locked in and given some hard bread and water. We would know where they were, at least, for one day.

Our next big stop was in St. Louis where we lay in the yard for about two hours taking on ice and water. It was about the hottest spot that I remember being in for many years and there was no desire on the part of the men to leave what little shade the cars afforded.

Our run was then across Missouri to Kansas City where we were due at 9.15 p. m. Wednesday. We were making good time and there was no convenient place to stop for exercise during the day. We tried to arrange for some place for the men to leave the train for a swim, or at least a chance at a bath under a water tank, but it was impossible to find any place that would answer, so the only stops for the day were the usual ones to change engines and to get water and the men were getting a little restless. It was pretty hot on the train and among themselves some of them planned to "go ashore" at Kansas City where they knew we were to make a long stop for ice and water. The officers heard of this intention only about five minutes before we got to the station, too late to make any very elaborate plans to defeat it.

The station at Kansas City is below the street level and the officers thought that they could hold the men in the station all right; so guards were arranged for and every precaution taken but some of the men jumped out of the windows on the back side of the train and went out over the tracks. A few, too, rushed one of the Hospital Corps men on guard at one of the stairways and got out that way. There being only five officers to watch a seventeen car train, it is not to be wondered at that some of the men were able to get away.

There were not over 35 or 40 men outside of the station; no serious damage was done; no men were arrested by the police and there was no riot of any kind. Some of the men carried off or destroyed some fruit on the outside of a small fruit stand near the station and the proprietor got excited and called the police. The damage done was very slight, and probably if the man had kept his head there would have been none at all. The train Quartermaster appraised the damage and payment was arranged for.

After about two hours the train was filled up with ice and water and the train conductor was given the signal to go ahead. A check roll call was made by the Acting First Sergeants immediately after getting under way and every one was found to be on board.

From Kansas City we went via Emporia, Newton and Wichita, across Kansas, arriving at Wellington, Kans., Thursday morning. This was an ice and water stop and the men were all taken off the train and marched a couple of miles into the country and back again, then given a little drill (which they sadly needed) in an open field beside the tracks. They were "ashore" here for an hour and a half and all enjoyed it immensely. There were, however, a few more candidates for the baggage car for roaming about without permission. The men were getting restless and the non-commissioned officers were having trouble in controlling them; so it was decided to hold a summary court on the next offender and give him a good stiff sentence as an example to the rest. We had asked for another baggage car to use as a "calaboose" as we did not want the prisoners loose among the contents of our own baggage car, and it would not be fair to ask a guard to share their punishment with them. The railroad people promised one at Waynoka, Okla., that afternoon so we made ready to use it.

That day we passed through the town of Kiowa, Kans., the town where Carrie Nation smashed the first saloon, but we saw neither Carrie nor the saloon.

In addition to his other duties the Sergeant ran a little sales commissary for the benfit of the men on the train, providing cigarettes, tobacco, stamps, postal cards, envelopes and the like, and not having had time to stock up at Kansas City, on account of the excitement there, he had run short of cigarettes and as none are sold in Kansas all hands had to go without that day.

All the rest of the day Thursday, which was a hot one, we were going across Kansas and into Texas which we entered at Higgins. We were getting higher and higher all the time and the weather was getting more and more comfortable We got into Amarillo, Texas, in the early evening and there we consulted with the train despatcher to see when we would arrive in El Paso. We told him that unless we could arrive there by 7 o'clock Friday evening we did not want to get there until 6 o'clock on Saturday morning. After thinking it over for a minute he took down his telphone and ordered two big oil-burning engines hitched to our train and told us he would "give us our head" all night and thought we would make El Paso all right Friday night but that we would know "for sure" at Encimo, N. M., at about 2.30 the next morning.

That night, riding over the plains behind the two big engines at better than fifty miles per hour, was a most wonderful trip. With a full moon, it was almost as light as day. We had a caboose, or "buggy" hitched behind for the use of the

train crew, and the officers sat in the cupola of the buggy until the small hours of the morning enjoying the wonderful effect of the moonlight. The only stops were for water for the engines and we covered ground in fine style. Ours was a big heavy train yet at times we were making as high as sixty miles an hour and we were climbing all the time too. At Mountainair, N. M., we were at an altitude of 6,470 feet above the sea level having climbed up from 3,649 feet at Amorillo. Sweaters were very comfortable that night while riding the buggy and automobile goggles were absolutely indispensible to keep the dust from one's eyes. On one lonely stretch of prairie about midnight an automobile was sighted crawling along over the trackless plain more than twenty miles from a railroad station in either direction. It was without lights and apparently headed along parallel to the tracks and making good time for it was in sight for quite a few minutes. We could not be sure whether it was a "fliver" or not, though the bets were that it was. A little later we saw two horsemen silhouetted against the skyline like little toys, and taken all through it was one of the most inspiring nights that any of us could remember, giving us a realizing sense of the immensity of the plains in that part of the country.

We got word at Encino that we would be into El Paso by 7 o'clock Friday evening and all turned in happy that the end of our trip was in sight.

We arrived at Belen, N. M., Friday morning where we were to take on ice and water. While here the men were taken ashore and given a little exercise. Two of the companies were turned out in full kit and an inspection was made in an endeaver to locate some missing property. We made a shorter stop than usual here as the railroad people wanted to run our train ahead of the regular passenger train to El Paso in an endeavor to establish a speed record with our train. While here we were told by the train men that the men that we had seen walking the tracks the last night were special track walkers, each patrolling one mile of track, as Mexicans living along the right of way had made threats of wrecking troop trains going through there, and only a week before an attempt to wreck a train by putting ties on the track had been discovered by one of these same track walkers. They did not tell us of it during the night simply saying in reply to our questions regarding so many men seen on the tracks that they did not know why they were there. We had little trouble with a few of the bad actors while waiting at Belen and had to hold another summary court as soon as the train got under way.

In the early afternoon we got our first sight of any soldiers at Las Cruces, N. M. As the train passed slowly through the town some of the soldiers in the street shouted that they were of the 5th Mass. Infantry, and we later in the day discovered that it was H Company of Charlestown which was doing border duty there. Shortly after that we entered Texas again at La Tuna where we saw more soldiers. At Canutillo, a small town, a short distance from El Paso, we were informed that a freight wreck on the outskirts of El Paso might hold us up for half an hour or so but that the engineer was going to see about it and if any of the officers would like to make the trip they were welcome to do so. One of them took

advantage of the offer and went along, the rest staying by the train which was halted just outside of the town. We stayed the 45 minutes, during which time we discovered that there was a company of the 5th Infantry of Mass. stationed only a short distance away doing border duty. We telephoned to them and the officers came over to see us in an auto truck with a guard of four men with rifles and a bandolier of ammunition slung over their shoulder in addition to a full belt, making them very warlike in appearance, but we were given to understand by the officers that that was the way all went about on the border as the unexpected was expected to happen at any time. This commany was C of the 5th Infantry of Newton which had been there for about a week and were to be there for a week or ten days more.

During our stop at Canutillo the train was right on the bank of the Rio Grande and there were many requests to be allowed to have a swim, but it was impossible under the circumstances; even at this time the men did not realize what they were there for and could not understand why more attention was not paid to their wishes by the officers.

We finally got going again only to be halted outside the wreck which was not fully cleared away. It was getting along late in the evening and our chances of spending another night aboard the train were getting better all the time. At about 9 o'clock we were halted outside the wreck on a long curve where the whole length of the train could be seen from the rear car and the officers were sitting on the bank alongside the train watching it, and the automobiles which were as thick on the fine road along by the track as upon Commonwealth Avenue, when a slight commotion was noticed about half way down the train and two of the officers went down to investigate when they were astonished to find that about half the men on the train were outside strolling around on the *opposite* side from that which they had been watching. We were in the outskirts of El Paso at the time and there were some adobe huts that seemed to interest the men a whole lot. They were soon driven aboard the train, however, and double guards put at the doors with instructions that serious trouble awaited any man who so much as stuck his head outside a car door.

As this was finished the officers were having a conference in their car as to whether the Commanding Officer of the regiment whose recruits we had should be notified that night or whether we should wait till morning, when the train stopped, the rear door of the car opened and in walked the Commanding Officer accompanied by almost his entire board of officers and a lot of husky non-coms. They appeared astonished and somewhat disappointed to find everything so calm and peaceful and explained to us that a railroad man had telephoned to the Commanding Officer at Camp Cotton that "the officers on the train are locked in the baggage car and the recruits running the train to suit themselves and are all over the town running wild." Officers' call had been sounded and all available officers had been rushed in trucks to the train to rescue us and to quell the riot. When they came alongside they found every door locked, the train in absolute quiet and darkness with the exception of the officers' car where the above mentioned conference was going

on. All of this is illustrative of the exaggerated stories in circulation throughout our entire trip.

The train at last stopped directly in rear of the camp of the 8th Infantry, N. G. Mass. at Camp Cotton at 10.10 P. M. Friday night, and but for the freight wreck we would have been in and unloaded by 7 o'clock. An armed guard was placed about the train by the 8th Infantry and orders were given to have breakfast at 5 o'clock and detrain at 6 the next morning, after which most of the officers turned in to get what little sleep they could. Right here we had our first illustration of the uneasy times on the border as the rear of the train was not over 200 yards from Mexico and about 2 A. M. some excited individuals over in Mexico began shooting off their rifles. About fifty shots were fired which aroused most of the train but the bullets did not seem to be coming in our direction nor did the camp below us appear to be unduly alarmed so we supposed that that was the regular thing there and went back to sleep again.

Promptly at 6 o'clock Saturday morning the men were off the train with all their possessions separated into company units and marched to their respective company streets by officers sent to get them. In fifteen minutes, they were all away and the responsibility of the train officers was over, the prisoners in the baggage car having been turned over to the Officer of the Day of the regiment.

The work of taking down the ranges, policing the train and getting out the food that was left was attended to by a working party from the regiment and in a very short time after a formal inspection of the train by the Train Commander it was turned over to the railroad officials and the journey of the troop train was over.

OH! YOU PLATTSBURG!

If a regiment of 1000 men, with equipment of 60,000 pounds, marches ten miles, it does as much work as laborers raising a weight of 260,000 tons a distance of one foot.

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